

REMARKS

The Office Action mailed July 25, 2003 has been received and the Examiner's comments carefully reviewed. Claims 1-27 are pending. Claims 1-6, 8-15, 17-24, and 26-27 were rejected by the Office Action. For at least the following reasons, Applicants respectfully submit that the pending claims are in condition for allowance.

Rejection of Claims 1-6, 8-15, 17-24, and 26-27

The Office Action rejected claims 1, 10, and 19 under 35 U.S.C 102(e) as being anticipated by Ito, U.S. Patent 6,532,333 (hereinafter "Ito"). The Office Action rejected Claims 2, 11, and 20 under 35 U.S.C. 103(a) as being unpatentable over Ito in view of Perkins et al., U.S. Patent 5,828,414 (hereinafter "Perkins"). Claims 3, 4, 12, 13, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito in view of Masters, U.S. Patent 5,212,772. The Office Action rejected Claims 5, 14, and 23 under 35 U.S.C. 103(a) as being unpatentable over Ito in view of Bodnar et al., US. Patent 6,295,541 (hereinafter "Bodnar"). Claims 6, 15, and 24 are rejected by the Office Action under 35 U.S.C. 103(a) as being unpatentable over Ito in view of Faillace, U.S. Patent Re. 31,903. Claims 8, 17, and 26 are rejected by the Office Action under 35 U.S.C. 103(a) as being unpatentable over Ito in view of Faillace and further in view of Maxwell, U.S. Patent 6,106,571. Claims 9, 18, and 27 are rejected by the Office Action under 35 U.S.C. 103(a) as being unpatentable over Maxwell in view of Faillace and further in view of Ito.

Claim 1 is submitted to be allowable at least because the prior art of record does not disclose, teach, or suggest "encoding the difference information with reference to a set of commonly occurring difference values for a type of the data to be compressed," as recited in Applicants' Claim 1.

The Office Action cites Ito at column 1, 50-column 2, line 6 and column 5, lines 15-22. This portion of Ito explains the MPEG2 compression scheme. The MPEG2 scheme is the compression method that is generally used to record video information on DVD-RAM. When video data is compressed using the MPEG2 scheme, it is encoded into three pictures types: an I picture, a P picture, and a B picture. The P picture and B picture are created during the MPEG2

compression process. The P picture and the B picture can only be decompressed by using difference information.

Claim 1 recites “encoding the difference information with reference to a set of commonly occurring values **for a type of the data to be compressed**” (emphasis added). In Ito, the uncompressed video data is the data that is to be compressed, and the I picture, the P picture, and the B picture are the compressed data. The P picture and the B picture are not a type of data to be compressed. The P picture and B picture are types of data that have already been compressed.

Additionally, Ito does not disclose “encoding the difference information **with reference to a set of commonly occurring values,**” as recited in Applicants’ Claim 1. The MPEG2 compression scheme described in Ito uses difference values, but does not encode difference information “**with reference to a set of commonly occurring values.**”

Description of a particular embodiment of Applicants’ invention may help illustrate the point. This embodiment illustrates an example of encoding difference information with reference to a set of commonly occurring values, but other embodiments are considered within the scope of Claim 1. As described in page 13, lines 10-17, “To improve compression further, the delta value is encoded before it is stored. In a particular embodiment, the delta value is encoded with reference to a set of 256 typical delta values for the particular type of delta value. This aspect of the compression scheme is dependent on the type of delta value in that, for example, timestamp delta values are encoded with reference to a different set of typical delta values than is used in encoding stack address delta values. This common value encoding technique can be used to represent the vast majority of delta values. The remaining delta values, i.e., those other than the 256 typical delta values, are simply stored as 16-bit delta values.” The described embodiment illustrates one example of “encoding the difference information with reference to a set of commonly occurring difference values,” and is not intended to limit the scope of the claims in any way.

In contrast, the MPEG2 compression scheme disclosed in Ito involves compression of video data. The **compressed** data includes three types of pictures, an I picture, a P picture, and a B picture.

Claims 2-8 are submitted to be allowable at least because they depend on Claim 1, which is proposed to be allowable.

Additionally, Claim 5 is submitted to be allowable because the prior art of record does not disclose, teach, or suggest "if the difference information is timestamp difference information, encoding the difference information as an unsigned quantity with reference to a set of commonly occurring timestamp difference values." It is respectfully submitted that combining Ito and Bodnar would not result in a method as recited in Claim 5. It is also respectfully submitted that there is no motivation to combine the references.

Bodnar discloses a method of clock-drift compensation. The method evaluates timestamp(s) from one clock with timestamp(s) from another clock to determine which timestamp is accurate. To perform this evaluation, each timestamp to be compared is converted into a timestamp range. The time range represents a time range of possible "true" times for the timestamp when compensated for drift. The timestamp range is defined by an upper and a lower timestamp range boundary. The timestamp ranges are then compared, and a winner is selected. (See Bodnar column 28, line 45-column 29, line 57).

The Office Action states that "it would have been obvious to one skilled in the art at the time the invention was made to combine the compression function based on the difference information as taught by Ito with the use of timestamp information as taught by Bodnar because the timestamp information could be used for synchronization or other timing functions in the system." If the compression taught by Ito were combined with the use of timestamp information taught by Bodnar, timestamp data would be transformed into a range of timestamp data defined by an upper and a lower time boundary. A range of timestamp data is not difference information. Accordingly, combining Ito and Bodnar would not result in a method as recited in Claim 5.

Additionally, there is no motivation to combine the references. Ito discloses an MPEG compression scheme. The Office Action states that, "the timestamp information could be used for synchronization and other timing functions." The purpose of a compression scheme is to

compress data. There is no motivation to modify a compression scheme by altering timestamp data to be compressed for synchronization purposes.

Claim 6 is also submitted to be allowable because the prior art of record does not disclose, teach, or suggest “if the difference information is stack difference information, encoding the difference information as an unsigned quantity with reference to a set of commonly occurring stack difference values.”

The Office Actions states that, “Faillace teaches a stack for storing the absolute value of difference information.” The Office Action further states that, “it would have been obvious to one skilled in the art to use at the time the invention was made to combine the compression function based on difference information in a stack as taught by Faillace because the last in first out feature of a stack allows the difference data to be correlated with other corresponding data in the system.”

Claim 6 recites, “if the difference information is stack difference information, encoding the difference information....” Faillace (US Patent Re. 31,903) teaches storing difference information in a stack. (See column 10, lines 43-67). Faillace does not teach encoding stack difference information, as recited in Applicants’ Claim 6. Faillace also does not teach encoding stack difference information as an unsigned quantity with reference to a set of commonly occurring stack difference values, as recited in Applicants’ Claim 6.

Claim 8 is submitted to be allowable because combining the cited references would not results in a method with the limitations of Claim 8. Faillace teaches storing difference information in a stack. Claim 8 recites, “if the data to be compressed represents stack information....” As explained with regard to Claim 6, Faillace teaches storing difference information in a stack. Faillace does not teach compressing data that represents stack information, as recited in Claim 8. Accordingly, the teachings of Faillace are irrelevant to Claim 8.

Additionally, Claim 8 is submitted to be allowable because there is no motivation to combine Maxwell with Ito. Maxwell teaches calculating the difference in time stamps between the entry and exit of a function. (See Maxwell, column 3, lines 38-67). Claim 8 recites “if the

data to be compressed represents stack information... recording a single difference value for the stack information.” Claim 8 recites that the data to be compressed represents stack information. There is no motivation to modify such that if stack information is being compressed, a single timestamp difference value would be recorded for the stack information. The Office Action states that Maxwell could be combined with Ito “for the purpose of collecting information about the time spent calculating a function .” If the data to be compressed is stack information, as recited in Claim 8, there is no motivation to combine the references.

Claim 9 is submitted to be allowable at least because the prior art of record does not teach “if the profiling data is timestamp data, encoding the difference information as an unsigned quantity,” for reasons analogous to those explained with regard to Claim 5. Claim 9 is also submitted to be allowable at least because the prior art of record does not teach “encoding ... with reference to a set of commonly occurring ... differences values,” for reasons analogous to those explained with regard to Claim 1. Claim 9 is also submitted to be allowable at least because the prior art of record does not disclose, teach, or suggest “if the profiling data is stack data, encoding the difference information as an unsigned quantity,” for reasons analogous to those stated with regard to Claim 6.

Claim 10 is submitted to be allowable at least for reasons analogous to those stated with regard to Claim 1. Additionally, Claim 10 is submitted to be allowable because Ito does not disclose “at least one probe, configured to collect profiling data during execution of an application.” Ito discloses an MPEG2 compression scheme that does not involve profiling data.

Claims 11-17 are submitted to be allowable at least because they depend on Claim 10, which is proposed to be allowable. Claim 14 is also submitted to be allowable for reasons analogous to those stated with regard to Claim 5. Claim 15 is also submitted to be allowable for reasons analogous to those stated with regard to Claim 6. Claim 17 is also submitted to be allowable for reasons analogous to those stated with regard to Claim 8.

Claim 18 is submitted to be allowable at least for reasons analogous to those stated with regard to Claim 9.

Claim 19 is submitted to be allowable at least for reasons analogous to those stated with regard to Claim 10. Claims 20-26 are submitted to be allowable at least because they depend on Claim 19, which is proposed to be allowable. Claim 23 is also submitted to be allowable for reasons analogous to those stated with regard to Claim 5. Claim 24 is also submitted to be allowable for reasons analogous to those stated with regard to Claim 6.

Claim 27 is submitted to be allowable at least for reasons analogous to those stated with regard to Claim 9.

For at least the foregoing reasons, Claims 1-27 are submitted to be allowable, and notice to that effect is earnestly solicited.

Objection to Claims 7, 16, and 25

Claims 7, 16, and 25 were objected to as being dependent on a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 7 depends on Claim 1, which is proposed to be allowable. Claim 16 depends on Claim 10, which is proposed to be allowable. Claim 25 depends on Claim 19, which is proposed to be allowable. For these reasons, it is respectfully submitted that Claims 7, 16, and 25 are proper, and notice to that effect is earnestly solicited.

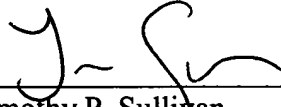
Summary

It is respectfully submitted that each of the presently pending claims (Claims 1-27) are in condition for allowance and notification to that effect is requested. The Examiner is invited to contact Applicants' representative at the below-listed telephone number if it is believed that prosecution of this application may be assisted thereby. Although certain arguments regarding patentability are set forth herein, there may be other arguments and reasons why the claimed invention is patentably distinct. Applicants reserve the right to raise these arguments in the future.

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Respectfully submitted,

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